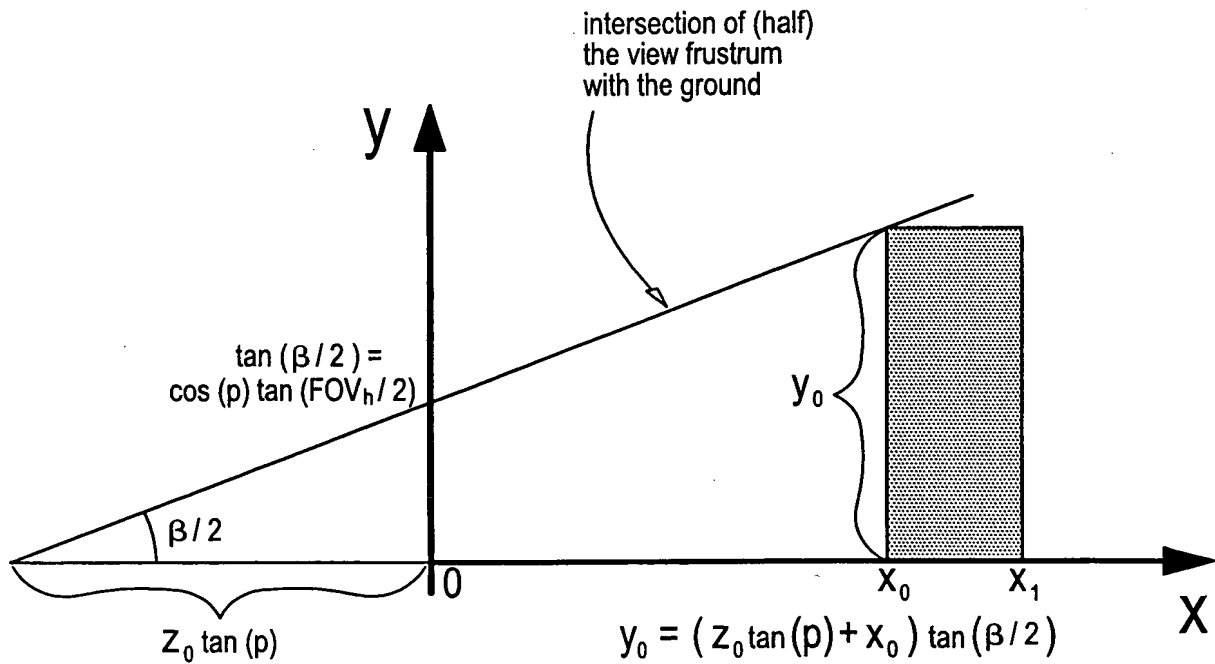
**FIG. 1A****FIG. 1B**

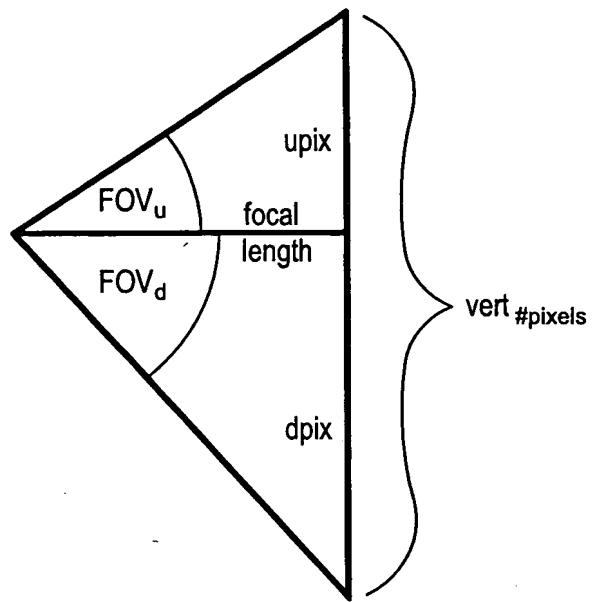


FIG. 2

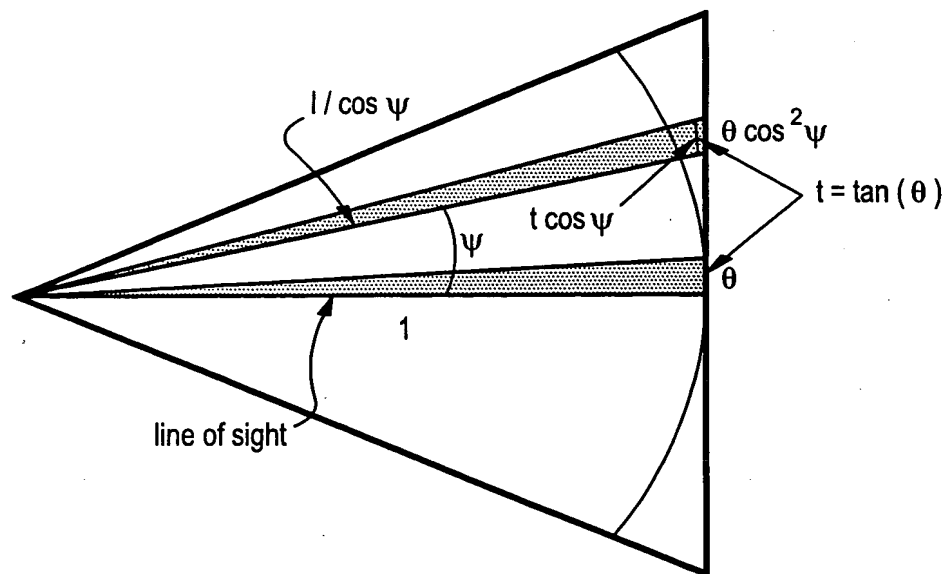
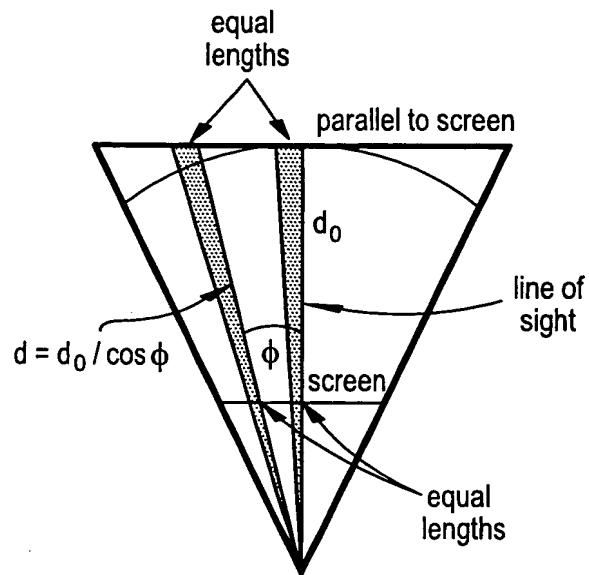
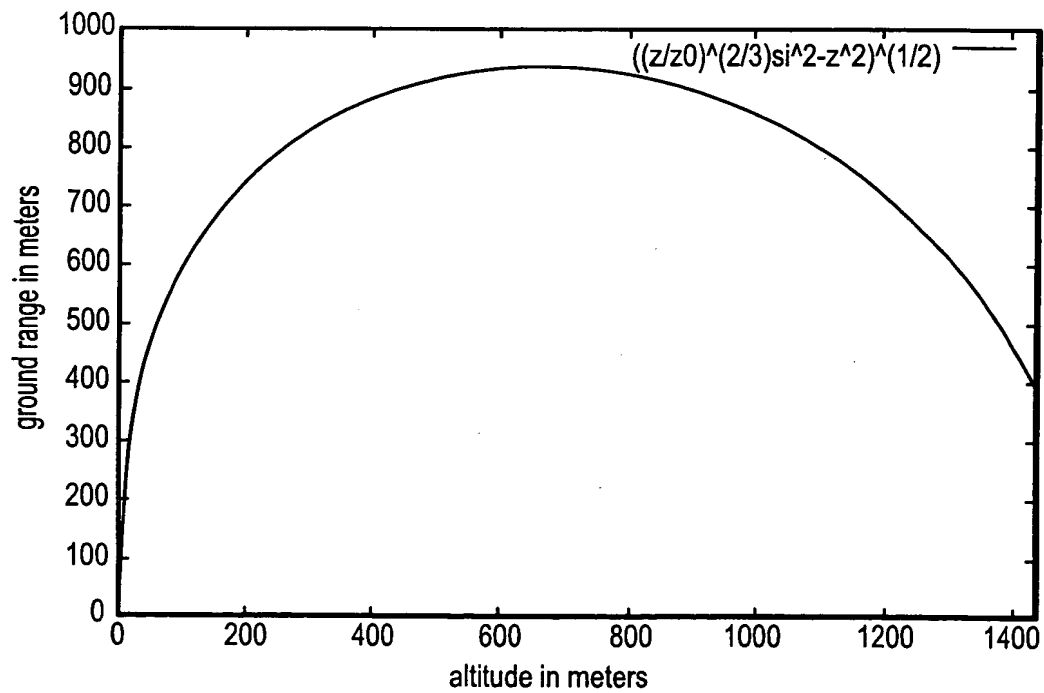


FIG. 3

**FIG. 4****FIG. 5**

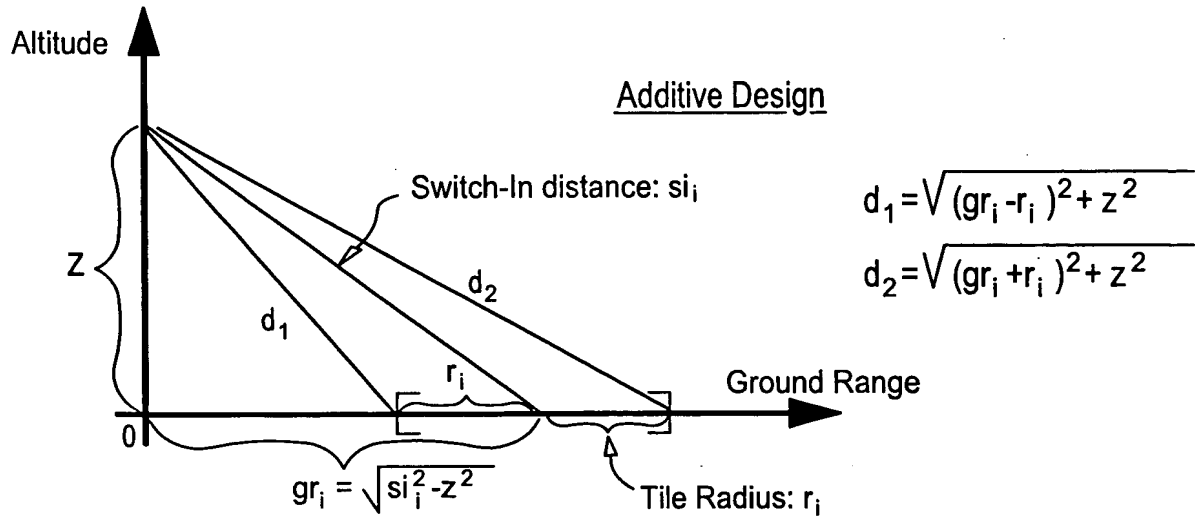
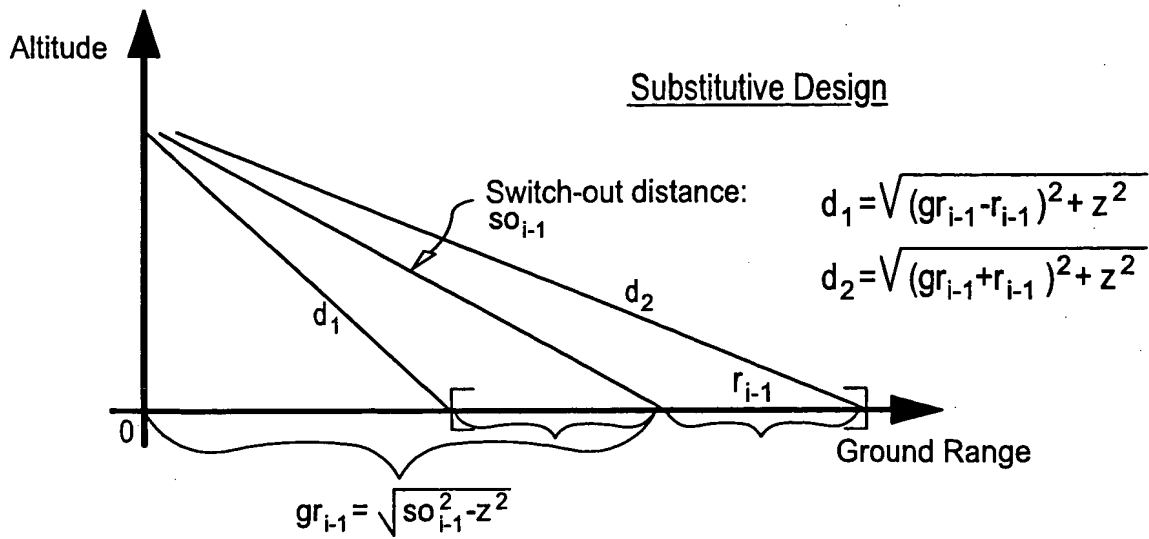
**FIG. 6A****FIG. 6B**

FIG. 7A

FIG. 7B

FIG. 7

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
1																				
2																				
3																				
4																				
5																				
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17																				
18																				
19																				
20																				
21																				
22																				

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Channel and View Information

depth of view: 166,770 m

total horizontal field of view: 73.3 deg

up field of view: 30.63 deg

down field of view: 33.14 deg

total vertical field of view: 63.77 deg

channel height: 1,200 pixels

channel width: 1,600 pixels

maxAlt: 15,000 m

hfov: 1.28 radians

ufov: 0.53 radians

dfov: -0.58 radians

vfov: 1.11 radians

focal length: 984.5 pixels

Design Parameters

minimum size of objects in a tile: 1.0 pixels

maximum size of objects in a tile: 6 pixels

polygon budget: 3,000

Setup for Quad Tree Simulation

altitude: 2,500 m

vertical line of sight: 31.4889 deg

worst case LOS: 31.4889

eyepoint location override x: m

y: m

LOD Scale: 1.2675

eyepoint location Recommended: 55,560 13,890

Used: 55,560 13,890

scaling formula = 1.2675

Tiling Scheme Definition

coverage size x: 111120 m

y: 111120 m

num quadtree tiles in coverage x: 2

y: 2

number of quadtree levels: 8

2 to 8

Tiles in Range Band of Highest LOD: 2

Polygons per tile Fall-off ratio: 1.1

1.1

hierarchy type: 1

Additive Hierarchy

smallest tile size x: 434.0625 m

y: 434.0625 m

Output parameters for FlightG

design altitude for scaling: 1,227.7

clamp Scale: 0.9036

clamp altitude: 905.8

FIG. 7A

Output (Summary)				
Static Switch ranges (before scaling)		number of polys per tile	cumulative number of polys per km square	Object critical size range for each level
in	out			min max
333,540.00	51,604.58	7.24	0.00	172.91 793.05
51,604.58	29,320.79	25.96	0.04	143.46 167.88
29,320.79	16,659.54	30.90	0.20	79.98 103.72
16,659.54	9,465.65	42.12	1.07	44.51 63.10
9,465.65	5,378.21	57.41	5.83	24.51 37.94
5,378.21	3,055.80	78.24	31.78	11.74 22.60
3,055.80	1,736.25	106.64	173.28	5.04 13.36
1,736.25	-	98.73	697.31	2.16 7.85

QuadTree Outputs	
LOD Nodes	248
Group Nodes	88
Visible tiles	68
Visible polys	3,774

Instructions / Intuitions

E3:E10 "Channel and View Information" is presumed to be fixed by the simulation specification

The "minimum and maximum size of objects in a tile" parameter defines the acceptable size of the objects that can occur at each level of the hierarchy.

E13:E14 "Tilting Scheme Definition"

The coverage area is set to 111,120 by default to reflect a standard geocell.

E15:E16 The number of quadtree tiles in the coverage define the size of the vega regions. The result is in E26:F26. K27:L31

These numbers represent the output of a simulation. After any change of input data, the QuadTree Simulation button must be activated, otherwise these numbers are incorrect. They are based upon counting visible tiles in the Simulation, and do not represent what the actual Performer™ scene graph would provide.

FIG. 7B

	A	B	C	D	F	G	H	I	J
1					QuadTree Simulation Outputs				
1	Proprietary Information				LOD Nodes	444			
1					Group Nodes	288			
10									
	Static Switch ranges (before scaling)	Tile Level	Switch In Dist	Switch-Out Dist	Resulting Number of tiles of each size on FOV	Density (num polystyle), computed for dall	Override density formula	Polygon count	Max. Altitude at which Tile is visible
11	72,824	1	333,540	61,697	8	12.82		103	20,000
12	45,515	2	61,697	38,561	4	23.78		95	20,000
13	28,447	3	38,561	24,101	2	24.35		49	20,000
14	17,779	4	24,101	15,063	8	24.94		200	20,000
15	11,112	5	15,063	9,414	10	25.54		255	20,000
16	6,945	6	9,414	5,884	16	26.15		418	20,000
17	4,341	7	5,884	3,677	19	26.78		509	10,447
18	-	8	3,677	0	18	92.28		1,661	5,162
19				Total Tiles	85		Total Polys	3,290	
	Input	Output- TileDesign	Output-FeatureSizes	Output-QuadTree					

FIG. 8

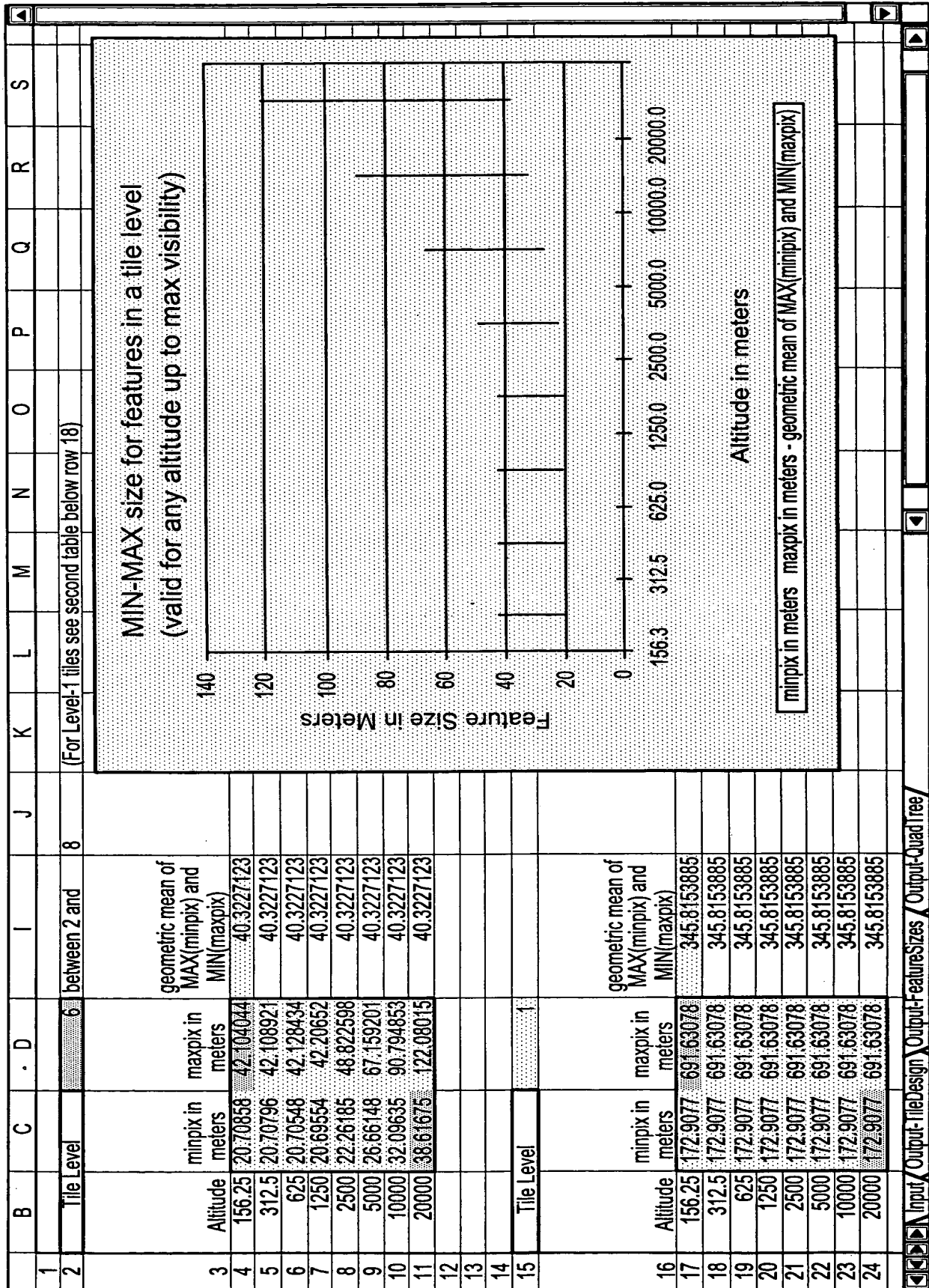


FIG. 9

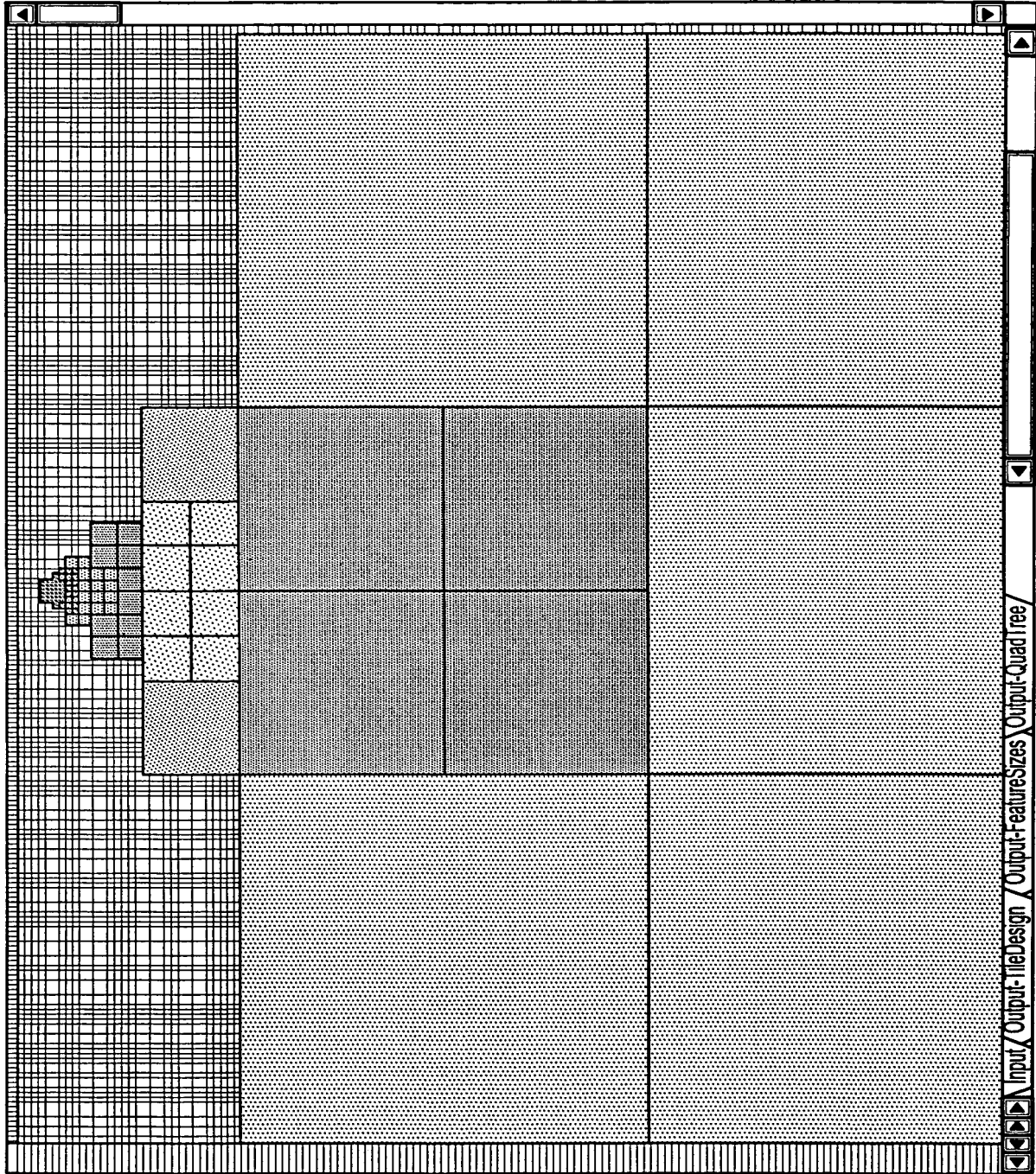
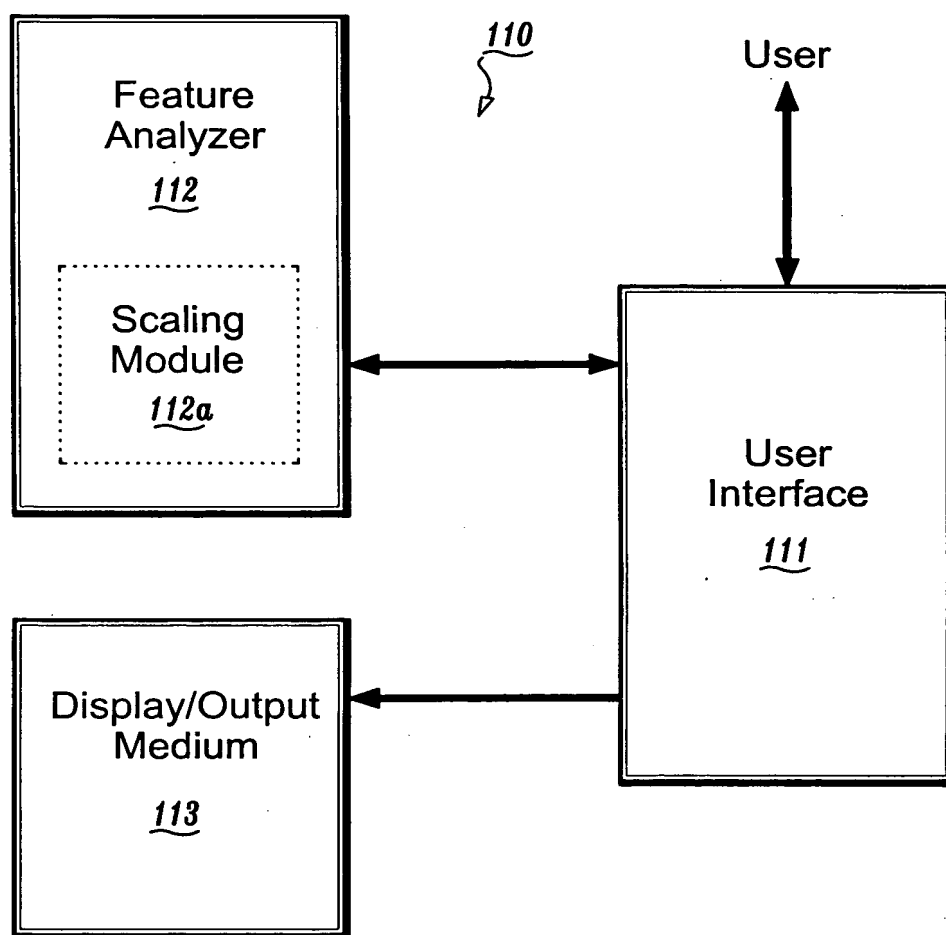


FIG. 10

**FIG. 11**

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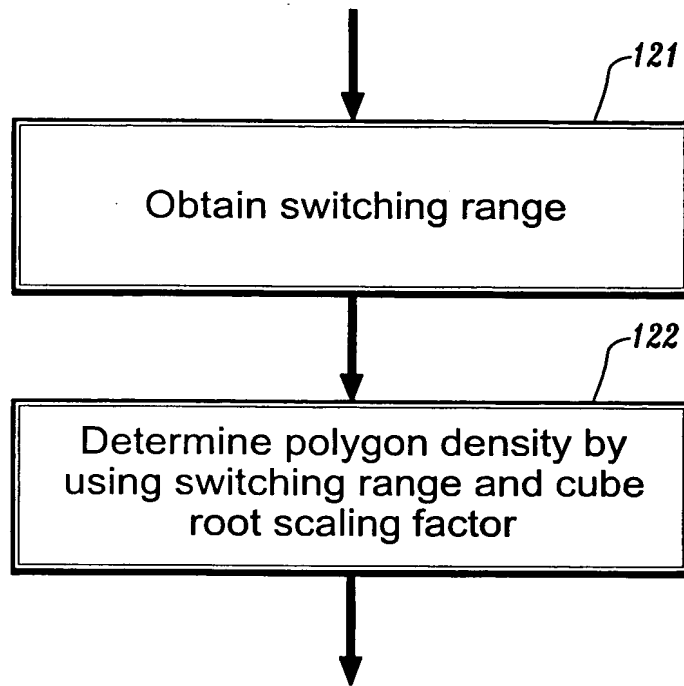


FIG. 12

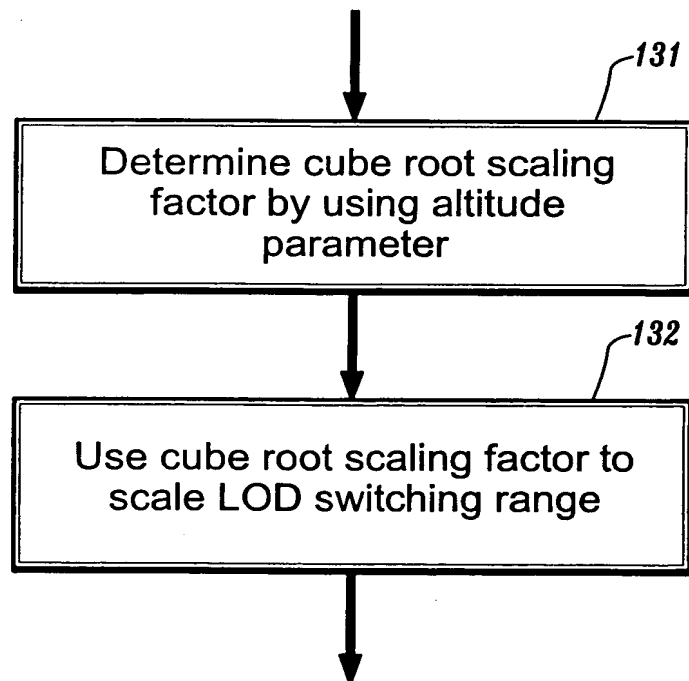


FIG. 13